



E u r o p e a n



C o n f e r e n c e

2005

The Legal Zone

Open Source Licenses and  
IPR issues for engineers

# agenda

- welcome to the legal zone!
  - who am I and what is this?
- explain OSS licenses **briefly**:
  - background to OSS
  - general issues and two specific styles of licenses
  - current developments
  - relevance to us
- look at IPR issues for engineers:
  - why they occur
  - what they are
  - how we should address them
- 30 minutes in total: introductory



# OSS licenses: background

- open source software approach:
  - it's about making software open for many, rather than closed for a few: permissive, not restrictive!
  - increasingly possible to build many software systems using OSS, e.g. Linux systems, 12,000 FreeBSD ports, 100,000 projects on SourceForge, etc
  - it's become high profile, increasingly important, and strategically relevant to many organisations
  - one of the largest topics in technology today, and a necessary area of knowledge for all developers
- open source software licenses are the foundation:
  - build upon a strong legal foundation of copyright and contract law: established internationally
  - define the rights, with the guarantee that they are valid and enforceable (and have been tested!)
  - but are not comprehensive, e.g. patent issues, and do not exist in a vacuum: they have other implications



# OSS licenses: general

- underlying basis is copyright/contract law
  - copyright protects expression, not ideas (-> patents)
  - restrictive rights granted automatically to author/owner
- building upon this, OSS licenses typically address:
  - liabilities, guarantees and fitness for use: usually all disclaimed or shifted to the user
  - notices and attribution: license text (RMI), authors names, use in advertising, endorsement, etc
  - dealing with the work itself: how can/can't it be used, e.g. non-commercial use, disclosure requirements, etc
  - dealing with derivatives/modifications to the work: allowable, and under what conditions?
- variety of type and nature of conditions form the many licenses that are in use, but 70% of projects use either GNU or BSD style licenses (from: OSI)

# OSS licenses: GNU style

- GPL (GNU Public License), originated with Richard M. Stallman and the FSF (Free Software Foundation) (highly politicised – e.g. RMS' many essays)
- widely known: GNU/Linux and GNU programs (e.g. gcc, bin/fileutils, etc): broad and deep industry profile
- the key conditions are:
  - that source and any changes must be made available to end users on reasonable terms (“copyleft”);
  - that any source linked/built with it must also be made available on these terms (“viral”)
- one key issue/risk as an integrator is “linking”:
  - LGPL (‘Lesser’ GPL) is more favourable (e.g. glibc)
  - dynamic linking (e.g. kernel modules) & “grey” areas
- seen as not commercially friendly for consumers: companies not (initially) honouring disclosure, circumventing availability conditions or using tricks



# OSS licenses: BSD style

- style refers to BSD (Berkeley Software Distribution) license itself, and those similar: MIT, Apache, etc
- very few, if any, restrictions: often just liability disclaimers: no requirement to make original or modified source available to end users
- widely used in many technologies, e.g. BSD O/S's, Apache, Perl, PHP, X-Win, SGI STL, etc
- seen as very commercially friendly: low cost and risk; used and highly adapted into many products, e.g. BSD O/S in Apple Darwin, Juniper Routers, MS SFU: in NDS SSR SPI/MPI: xerces (Apache), zlib, etc
- although, may not be a desirable license if the intention is to ensure source “freedom” (a strategy?)



# OSS licenses: others/variations

- wide variety of other “open source” licenses:
  - free, open, shared: definitional arguments
  - 50 (just a subset) approved by the Open Source Initiative (OSI): too many, it wants to consolidate
- one significant category are the shared source licenses, e.g. Apple’s APSL, Sun’s CDDL and Microsoft’s MSSSL: GPL like w/ patent grants
- Creative Commons (a Lessig creation) provides flexible open source licenses, tries to avoid the jargon and offer limited combinatorial flexibility
- if a work has no license, it’s still subject to copyright (which is highly restrictive): even newsgroup postings
  - but remember, protecting expression, not ideas
- others include: public domain, “beerware”, etc

# OSS licenses: developments

- there's a lot happening:
  - generally, more competence in understanding and using OSS licenses for technical/corporate strategy (incl. hybrid combinations), e.g. Sun (Solaris), Digium (Asterisk), MySQL, etc
  - correspondingly, greater awareness of risks/issues, e.g. “SCO v IBM” re Linux, other commercial licenses (viral issues)
  - increasing range/maturity of products/technical components available under OSS licenses: closed source versions to watch out, e.g. XBMC
  - patent issues are a big problem, and not covered or addressed by OSS licenses (also, quite politicised: e.g. high profile EU patent directive)





# OSS licenses: relevance

- can we, and how can we, use open source?
  - organisation is neutral: issues/risks mainly, e.g. our liabilities, onward licensing, accounting, etc
  - at component, application and product levels
  - tactical and strategic, as consumers and producers
- at what points do we consider the issues?
  - stages/gates in business/software lifecycle, e.g. requirements, design, code reviews, etc
  - as designers, implementers, reviewers, etc
- doing it properly and playing it safe
  - understand licenses and impacts, build knowledge and competence (some organisations have IPR training)
  - review by technical, legal, and management
  - audit trails, software “asset registers” and “h&s”
  - not cutting corners or taking uncalculated risks
- more to be explained next ...



# OSS quiz: who and why?



1



2



3



4



5



6



# IPR issues: background

- increasing interactivity in developing software, both formally and informally
- working with various third-party software
- working with external technical information
  - forums, newsgroups, and technical discussions, e.g. sourceforge forums, avrfreaks, comp.\*
  - use third-party code, algorithms, etc, whether from papers, source or libraries
  - reading/using “public” source code: web-pages, CVS, sourceforge, OS’s (Linux, BSD), etc
- working on extra-curricular projects
  - contributing to OSS projects
  - other technical projects, e.g. websites, blogs, etc
- these raise some common issues that we need to be aware of, and take care of



# IPR issues: licensing obligations

- internally, we have our own issues which need to be addressed: onward licensing, auditing, etc
- third-party artifacts have attached copyright licensing conditions, which must be met
- in the last year, Harald “one man band” Welte has pursued over 30 GPL violations
  - settlements, injunctions, court orders and bad PR
  - some of these were high-profile companies, some who thought they could ignore him (the little guy)
  - some of these may not have been intentional, but lack of understanding/communication
  - in one case, manufacturer obscured use of GPL code: injunction granted in the UK
- the OSS “community” does take action: products and programs are being disassembled and analysed – so we really do need to concern ourselves

# IPR issues: source code “pollution”

- risk of using third-party code internally, or disclosing proprietary code externally
- recently: the “SCO v IBM” debacle over Linux/USL, illustrates how dangerous this problem can be, especially for a disruptive competitor
- code snippets, modules and diffs, whether in webpages, forums, newsgroups, etc are copyrighted, and have licence conditions: can’t just take and use!
- we must be aware of our IPR and confidentiality agreements and potential conflicts of interest, and not to, or be suspected of, polluting code either way – whether as employees or professionals
- approaches involve
  - extra-curricular work: discuss with line managers, at professional organisation advice (e.g. SAGE-AU)
  - commercial work: legal department: q&a, NDA, etc



# IPR issues: disclosure of material

- technical discussions in public forums could easily disclose confidential material, or give competitive position
- white papers, presentations, PR, and other technical material are great, but can prejudice patent grants or disclose confidential material
- conversely, working with standards requires care (e.g. RAMBUS/JEDEC): many (e.g. IETF, W3C) require disclosure of interest or may impose licensing obligations that we want to be aware of ahead of time
- examples of this happening inside and outside: lost patents, damaged PR, costs, etc



# IPR issues: summary

- need to be aware of what they are:
  - which are copyright, patent, licensing, contract, confidentiality, etc
  - imposed by third-party materials, agreements, etc
- need to be aware of when they arise:
  - interaction with third-parties, when not covered by NDA or through extra-curricular work
  - various project stages, e.g. design/code reviews
- need to be take action:
  - discuss and review with peers or internal entities (e.g. legal) as appropriate
  - document, revisit (ongoing obligations, change in circumstances), and use instruments, e.g. NDA